Carbapenem-Resistant Organisms
Infection Prevention in Acute and Long-Term Care Facilities

To stop the spread of carbapenem-resistant organisms (CRO) in your facility, we recommend employing the following infection prevention strategies. This summary has been adapted from the Facility Guidance for Control of Carbapenem-resistance Enterobacteriaceae, but it can be applied to all CROs. Please refer to that guidance for more detailed information on any of these strategies.

1. Hand Hygiene

- Promote, monitor, and provide feedback on hand hygiene
- Ensure access to hand hygiene stations

2. Contact Precautions

- Train and educate healthcare personnel about contact precautions including proper donning and doffing
- Monitor and provide feedback on proper contact precaution adherence
- CDC does not recommend discontinuing contact precautions in most situations

Acute Care Contact Precautions

- Place CRO colonized or infected patients on contact precautions
- Empiric contact precautions might be used for patients transferred from high-risk settings

Long-Term Care Contact Precautions

- Place CRO colonized or infected residents that are high-risk for transmission on contact precautions
- For patients at lower risk for transmission use precautions based on type of care provided

3. Healthcare Personnel Education

- HCP should be educated about preventing transmission of CROs
- At a minimum this should include education and training on the proper use of contact precautions

4. Minimize Use of Invasive Devices

- Examples include: Central venous catheters, endotracheal tubes, and urinary catheters
- Device use should be reviewed regularly to ensure they are still required
- Devices should be discontinued promptly when no longer needed

5. Timely Notification from Laboratory When CROs are Identified

- Laboratories should ensure they have timely notification protocols in place to alert appropriate healthcare personnel of a positive CRO specimen

6. Communication of CRO Status at Discharge and Transfer

- Identify known infected and colonized patients at readmission
- Include the plan and type of invasive devices and the duration of any ongoing antimicrobial therapy

7. Promotion of Antimicrobial Stewardship

- Ensure that antimicrobials are used for appropriate durations and that the appropriate narrowest spectrum antimicrobial is used
- CDC has identified core elements for successful hospital and long-term care antimicrobial stewardship programs

8. Environmental Cleaning

- Perform daily cleanings that include areas such as bed rails, patient trays and other areas in close proximity to the patient
- Clean and disinfect areas around sinks regularly and do not store medical equipment near sinks

9. Patient and Staff Cohorting

- Cohort colonized or infected patients and the staff that care for them even if patients are in single rooms
- Reserve single rooms for patients with highest transmission risk (e.g., incontinence)

10. Screening Contacts of CRO Patients

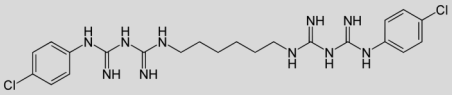
- Screen patients with epidemiologic links to newly-identified CRO colonized or infected patients

11. Active Surveillance Testing

- Screen high-risk patients at admission and periodically during their stay

12. Chlorhexidine Bathing

- Bathe patients with 2% chlorhexidine



For more information, see the CDC MDRO Infection Prevention Website

VDH VIRGINIA DEPARTMENT OF HEALTH

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Table 1. Recommendations for Carbapenem-Resistant Gram-Negative Organisms (e.g., CRE, *Acinetobacter* spp., *Pseudomonas* spp.) in Acute Care Settings*

Infection Prevention Measure	Carbapenemase-Producing Organism		Non-Carbapenemase-Producing Organism	
	Infected	Colonized	Infected	Colonized
Standard Precautions	Yes	Yes	Yes	Yes
Contact Precautions	Yes	Yes	Yes	Yes
Private Room	Yes	Yes	Yes	Yes; if feasible
Door signage	Yes	Yes	Yes	Yes
Designated or disposable equipment	Yes	Yes	Yes	Yes
Visitor Recommendations				
Perform hand hygiene often, and always after leaving resident's room	Yes	Yes	Yes	Yes
Wear gown/gloves if contact with body fluids is anticipated	Yes	Yes	Yes	Yes
Wear gown/gloves if no contact with body fluids is anticipated	No	No	No	No

*Acute care settings include acute care hospitals, long-term acute care hospitals, and ventilator units of skilled nursing facilities. Adapted by VDH from Washington State Department of Health.

Table 2. Recommendations for Carbapenem-Resistant Gram-Negative Organisms (e.g., CRE, *Acinetobacter spp., Pseudomonas spp.*) in Long-Term Care Settings*

Infection Prevention Measures	Carbapenemase-Producing Organism		Non-Carbapenemase-Producing Organism	
	Infected	Colonized	Infected	Colonized
Standard Precautions	Yes	Yes	Yes	Yes
Contact Precautions	Yes	Yes	Yes, if feasible	No, unless at higher risk of transmission †
Private Room	Yes	Yes	Yes, if feasible	No, unless at higher risk of transmission †
Restricted to Room	Yes	No, unless at higher risk of transmission †	No, unless at higher risk of transmission †	No, unless at higher risk of transmission †
Door signage	Yes	Yes	Yes	No, unless at higher risk of transmission †
Designated or disposable equipment	Yes	Yes	Yes	No, unless at higher risk of transmission †
Enhanced Environmental Cleaning §	Yes	Yes	Yes	No
Visitor Recommendations				
Perform hand hygiene often, and always after leaving resident's room	Yes	Yes	Yes	Yes
Wear gown/gloves if contact with body fluids is anticipated	Yes	Yes	Yes	Yes
Wear gown/gloves if no contact with body fluids is anticipated	No	No	No	No

*Adapted by VDH from Washington State Department of Health.

†Contact precautions should be maintained and every effort made to provide a private room for residents who are at higher risk for transmission, for example, those who are ventilator-dependent, have uncontained incontinence of urine or stool, wounds with difficult to control drainage, or who engage in behavior that spreads infection.

§ Enhanced environmental cleaning includes communicating with environmental services staff about their role in protecting patients, using EPA-approved disinfectants, ensuring thorough daily cleaning that includes areas in close proximity to the patient and terminal cleaning, and considering monitoring of cleaning processes to ensure all surfaces are cleaned and disinfected.